AMENDMENT & RESPONSE UNDER 37 C.F.R. § 1.116 - EXPEDITED PROCEDURE

Serial Number: 09/470,265

Filing Date: December 22, 1999

Title: DEVICES HAVING IMPROVED CAPACITANCE AND METHODS OF THEIR FABRICATION

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a dielectric interposed between said first and second conductive <u>capacitor</u> plates, wherein said dielectric is an oxide of a metal layer overlying the first conductive <u>capacitor</u> plate; and

a processor configured to access the monolithic memory device.

 $\sqrt[3]{v}$

79. (Once Amended) The capacitor of claim 19, wherein the [first conductive plate] metal layer is formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel.

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81. (Once Amended) The capacitor of claim 19, wherein the second conductive <u>capacitor</u> plate is formed from a material selected from the group consisting of polysilicon and metal.

82. (Once Amended) The memory system of claim 20, wherein the [first conductive plate] metal layer is formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel.

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84. (Once Amended) The memory system of claim 20, wherein the second conductive capacitor plate is formed from a material selected from the group consisting of polysilicon and metal.

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85. (Once Amended) The capacitor of claim 53, wherein the [first capacitor electrode] metal layer is formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel.



104. (Twice Amended) A capacitor, comprising:

a first conductive plate <u>serving as a first electrode of the capacitor</u> [formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel, alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead];

a second conductive plate serving as a second electrode of the capacitor, the second

conductive plate formed from a material selected from the group consisting of polysilicon and metal; and

a dielectric interposed between the first and second conductive plates, wherein the dielectric is an oxide of a metal layer overlying the first conductive plate, the metal layer formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel, alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead.

105. (Twice Amended) A memory system, comprising:

a monolithic memory device comprising a capacitor, wherein the capacitor comprises a first conductive capacitor plate [formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel, alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead,

a second conductive <u>capacitor</u> plate formed from a material selected from the group consisting of polysilicon and metal, and

a dielectric interposed between the first and second conductive plates, wherein the dielectric is an oxide of a metal layer overlying the first conductive plate, the metal layer formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel, alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead; and

a processor configured to access the monolithic memory device.

106. (Twice Amended) A capacitor comprising:

a first capacitor electrode [formed from] comprising polysilicon [at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel, alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead];

a dielectric layer formed by oxidizing a metal layer overlying the first capacitor electrode , the metal layer formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel, alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead; and



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a second capacitor electrode formed from a material selected from the group consisting of polysilicon and metal.

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113. (Once Amended) The capacitor of claim 104, wherein the [metal layer comprises titanium] first conductive plate comprises polysilicon having a thickness of 200 to 400 Angstrons.

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115. (Once Amended) The memory system of claim 105, wherein the [metal layer] first conductive capacitor plate comprises [titanium] polysilicon.

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117. (Once Amended) The capacitor of claim 106, wherein the [metal layer] <u>first</u> capacitor electrode has a thickness from 200 to 400 Angstroms [comprises titanium].

119. (New) A capacitor structure formed on a substrate, comprising:

a first conductive capacitor plate formed atop the substrate;

a first metal layer formed atop the first conductive capacitor plate;

a first metal oxide layer formed from the metal layer such that the remaining first metal layer forms part of the first conductive capacitor plate; and

a second conductive layer formed atop the first metal oxide layer.

120. (New) The capacitor structure of claim 119, further including:

a second metal layer formed atop the second conductive layer;

a second metal oxide layer formed from the second metal layer such that the remaining second metal layer forms part of the second conductive layer;

a third conductive layer formed atop the second metal oxide layer, wherein the first and second metal oxide layers and the second conductive layer form the dielectric of the capacitor and the third conductive layer serves as a second conductive capacitor plate.

121. (New) The capacitor structure of claim 119, wherein:
the first conductive capacitor plate comprises polysilicon and the first metal layer

comprises a metal selected from the group of metals consisting of titanium, tungsten, copper, gold, and nickel.

- The capacitor of claim 119, wherein the first metal layer is substantially completely oxidized to form the metal oxide layer.
- (New) The capacitor of claim 119, wherein the first metal oxide layer has a thickness of 123. between 10 and 1000 Angstroms.
- (New) The capacitor of claim 119, wherein the first metal layer is alloyed with another